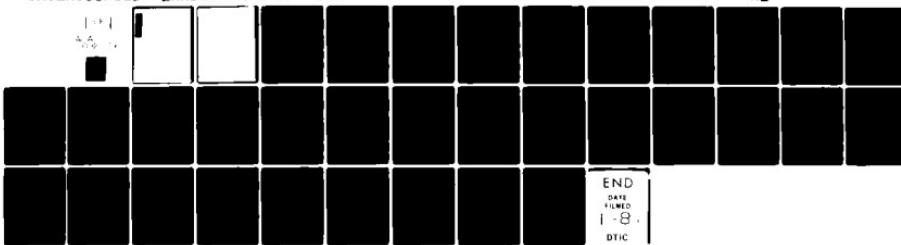


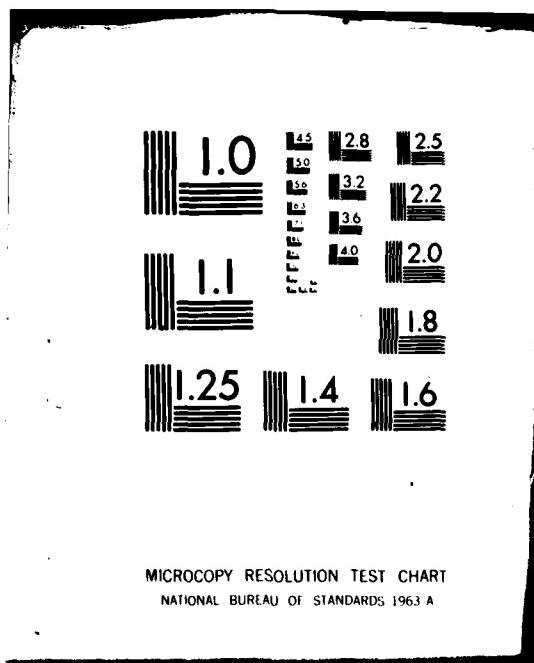
AD-A092 779 ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/G 4/2
12830C LANCE, MISSILE NUMBER 2227, ROUND NUMBER 356-DST, 30 SEP--ETC(U)
SEP 80

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Metorological data gathered for the launching of the 12830C LANCE, Missile Number 2227, Round Number 356-DST, presented in tabular form.		

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INTRODUCTION

12830C LANCE, Missile Number 2227, round Number 356-DST, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 0917 MDT on 30 September 1980. The scheduled launch time was 0845 MDT.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature ($^{\circ}\text{C}$), relative humidity, dew point ($^{\circ}\text{C}$), density (gm/cm 3), wind direction and speed, and cloud cover were made at the LC-33 Met Site at T-0 minutes.

(2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

b. Upper Air

(1) Low level wind data were obtained from RAPT, T-9 pilot observation at:

SITE AND ALTIMETER

LC-33 3000 METERS

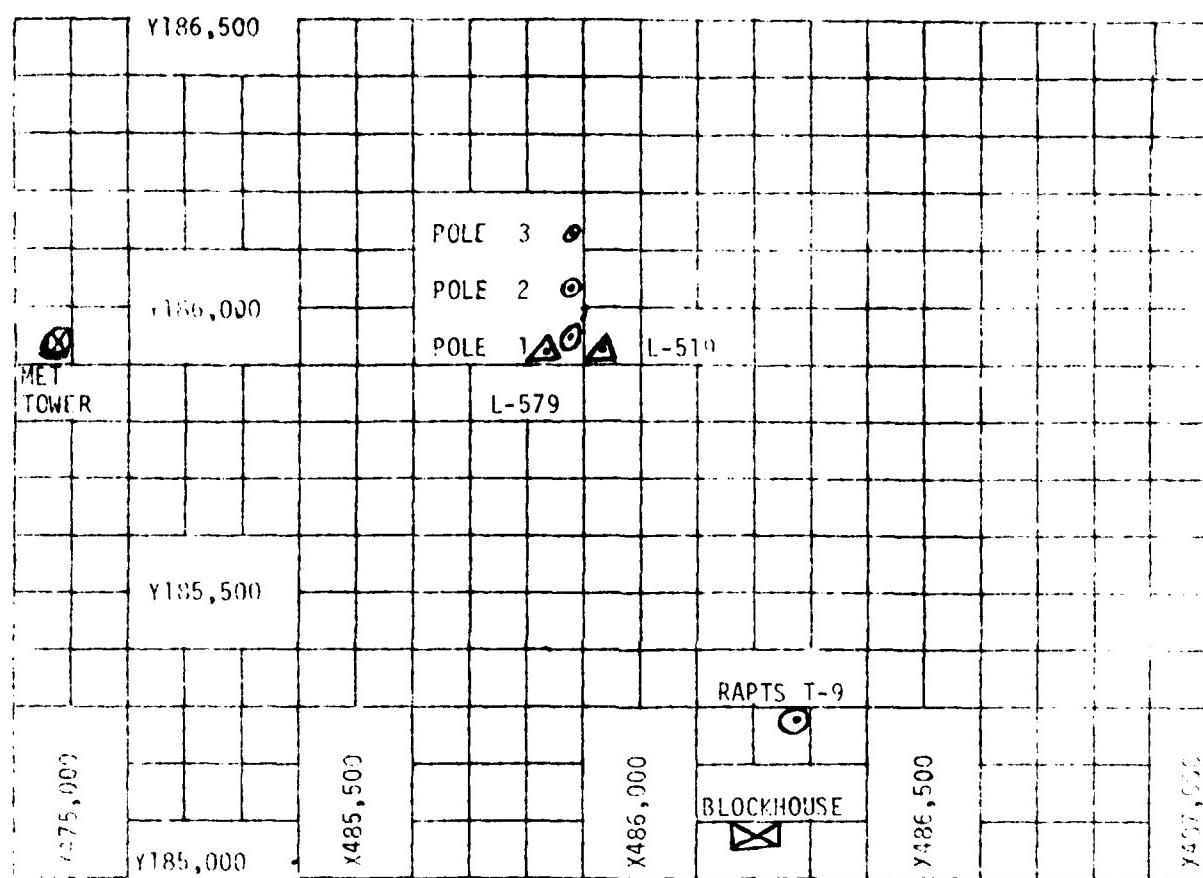
(1) Air structure data (rawinsondes) were collected at the following Met sites. Data were collected from surface to as high as possible (maximum 5000 feet) in 500-foot increments.

SITE AND TIME

HMN	0745 MDT
WSD	0815 MDT
JAL	0850 MDT

Accession For THIS GRANT THIS TIME THIS DATE THIS SPECIFICATION	□ □ □	Description/ Availability Codes and/or Spectral Data	A
---	-------	--	---

NORTH



- i. MEF TOWER - 4 Bendix Model T-20 Anemometers at 12 ft, 62 ft, 102 ft, and 202 ft with E/A recorders.
 2. POLE ANEMOMETER - Bendix Model T-120 with E/A recorders.
 - (a) Pole #1 - 38.7 ft.
 - (b) Pole #2 - 53.0 ft.
 - (c) Pole #3 - 83.6 ft.
 3. RAPTS T-9 Radar Automatic Pilot-Balloon Tracking System T-9 Radar.

TABLE 1. Surface Observations taken at 0915 MDT,
30 September 1980, at WSD, 12830C LANCE,
Missile Number 2227, Round Number 356-DST.

ELEVATION	3990	FT/MSL
PRESSURE	844.9	MBS
TEMPERATURE	19.8	°C
RELATIVE HUMIDITY	65	%
DEW POINT	13.0	°C
DENSITY	1043	GM/M ³
WIND SPEED	05	KTS
WIND DIRECTION	020	DEGREES
CLOUD COVER	CLEAR	

LF 2.

LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

POLE #1			POLE #2			POLE #3		
TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30	009	03	-30	015	06	-30	MISSING	
-20	009	03	-20	018	05	-20	MISSING	
-10	019	03	-10	015	04	-10	MISSING	
0.0	009	03	0.0	013	03	0.0	MISSING	
+10	006	04	+10	015	06	+10	MISSING	

LF 3.

LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TOWER)

LEVEL #1, 12 FEET			LEVEL #2, 62 FEET		
TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30	015	06	-30	MISSING	
-20	012	06	-20	MISSING	
-10	015	06	-10	MISSING	
0.0	022	07	0.0	MISSING	
+10	015	06	+10	MISSING	

LEVEL #3, 102 FEET			LEVEL #4, 202 FEET		
TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30	360	05	-30	360	04
-20	360	04	-20	360	06
-10	360	04	-10	354	05
0.0	360	05	0.0	352	04
+10	360	05	+10	348	04

PILOT BALLOON MEASURED WIND DATA

TABLE 4.

RELEASED FROM LC-33 DATE 30 September 1980 TIME 0919 MDT

COORDINATES (WSTM) X= 486,037.24 Y= 182,350.16 H= 3977.30

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH.

HEIGHTS ARE METERS AGL X OR FEET AGL _____.

HEIGHT AGL	DIRECTION DEGREES	SPEED KNOTS
sfc		calm
60	270	01
120	240	02
180	255	02
240	290	03
300	285	04
360	290	03
420	300	05
480	280	03
540	290	03
600	315	03
660	335	02
720	345	05
780	360	04
840	025	04
900	010	06
960	015	06.
1020	025	07
1080	025	07
1140	020	09
1200	020	11
1260	020	09
1320	025	05
1380	015	07
1440	015	07
1500	010	08
1560	010	08
1620	015	09
1680	020	09
1740	020	09

1950, 0815 MET
0215 MET
0215 MET

SIGHTING LINE DATA
2400' T.D.
MILE RANGE

STATION: ESS
SP-49043 LAT DEG
206.37933 LONG DEG

TABLE 5

PRESSURE MILLIBARS	STATIC PRESSURE IN. HGT.	ATMOS. DEPTHS IN. FTET	TEMPERATURE DEGREES CENTIGRADE	AIR DEPTHS IN. FTET	R.H. PERCENT
384.6	3089.0	16.0	12.9	12.9	12.0
678.8	4154.7	18.0	11.3	11.3	15.0
875.0	4341.8	20.0	11.7	11.7	19.0
659.4	4787.7	20.8	9.7	9.7	49.0
670.0	5099.0	20.1	9.0	9.0	46.0
321.6	6062.6	19.7	7.4	7.4	45.0
794.0	7027.0	18.6	-2.3	-2.3	4.0
766.2	8026.9	17.6	-16.1	-16.1	20.0
790.0	10528.0	11.0	-11.7	-11.7	19.0
660.4	12111.4	6.8	-6.7	-6.7	32.0
643.0	12830.7	5.7	-12.3	-12.3	6.0
618.0	13891.5	2.9	-14.7	-14.7	26.0
605.0	14953.4	4.4	-19.2	-19.2	16.0
577.4	15704.5	3.1	-21.0	-21.0	15.0
561.4	16449.5	1.0	-22.7	-22.7	15.0
537.6	17591.6	-1	-24.3	-24.3	14.0
500.0	19482.0	-5.1	-26.4	-26.4	14.0
446.6	22605.4	-13.5	-35.2	-35.2	14.0
426.4	23515.5	-14.2	-35.8	-35.8	14.0
400.6	25101.4	-17.6	-36.5	-36.5	14.0
358.6	27763.0	-22.2	-42.3	-42.3	14.0
339.6	29331.5	-24.0	-43.2	-43.2	15.0
390.0	32021.7	-30.5	-44.0	-44.0	16.0
235.2	33193.5	-33.5	-50.0	-50.0	17.0
250.0	36193.9	-40.0			
240.0	41071.0	-53.2			
196.2	41585.4	-53.5			
162.4	45605.1	-52.6			
150.0	47105.5	-66.0			
110.4	51493.4	-70.0			
111.6	52784.5	-73.5			
100.0	54705.9	-72.5			

• 5

0815 HRS MDT

TABLE 6 (continued)

TABLE 6 (continued)

REFRACTIVE INDEX	PRESSURE	TEMPERATURE	DEPTHS OF CLOUDS (M)	DEPTH OF DEPARTURE (%)	INTENSITY (%)	SPEED OF WIND (KNOTS)	DIRECTION (DEGREES)	WIND DIRECTION (DEGREES)	REFRACTION
1.33000	499.96	-25.1	-22.4	14.0	69.94	37.9	95.0	31.5	1.0001448
1.33000	433.94	-20.2	-2.0	14.0	632.7	35.5	95.7	32.0	1.0001445
1.33000	433.94	-16.3	-31.3	14.0	530.4	64.8	92.1	32.4	1.0001443
1.31000	471.71	-29.1	-31.3	14.0	521.2	63.2	91.1	32.0	1.0001441
1.31000	961.89	-10.4	-32.7	14.0	612.1	63.0	69.9	31.4	1.000138
1.31000	452.94	-11.7	-33.7	14.0	603.2	63.0	67.9	29.9	1.000136
1.31000	144.43	-15.0	-36.4	14.0	534.5	62.6	60.0	28.4	1.000134
1.30000	435.95	-15.3	-35.6	14.0	584.5	62.7	65.2	26.3	1.000132
1.29000	422.97	-14.2	-35.8	14.0	575.8	62.7	64.4	24.0	1.000129
1.29000	410.02	-15.2	-36.6	14.0	534.7	62.5	65.2	20.6	1.000127
1.29000	479.93	-10.5	-37.5	14.0	555.7	62.4	65.1	17.2	1.000125
1.29000	171.00	-17.4	-39.4	14.0	645.9	62.3	60.2	14.2	1.000123
1.28000	395.03	-13.5	-37.0	14.0	537.8	62.2	65.4	11.6	1.000121
1.28000	540.05	-19.1	-39.6	14.0	529.7	62.0	44.2	10.7	1.000119
1.28000	577.77	-20.0	-40.5	14.0	519.7	61.9	61.6	11.3	1.000117
1.27000	577.71	-20.9	-41.2	14.0	517.9	61.8	61.8	12.1	1.000115
1.27000	562.02	-21.7	-41.9	14.0	502.3	617.8	54.5	14.3	1.000113
1.26000	555.05	-22.5	-42.6	14.2	493.0	616.8	320.5	17.6	1.000111
1.26000	547.05	-23.2	-43.3	14.0	486.8	616.0	50.3	22.7	1.000109
1.25000	540.07	-23.9	-43.1	14.9	476.2	615.1	301.0	24.3	1.000107
1.25000	535.07	-24.9	-43.4	15.1	463.2	613.6	293.1	25.7	1.000105
1.24000	522.07	-25.0	-44.7	15.3	460.5	612.5	303.3	24.4	1.000103
1.24000	511.07	-25.1	-45.3	15.5	452.9	611.1	302.6	23.6	1.000102
1.23000	512.07	-25.2	-45.5	15.7	445.9	610.7	304.4	25.5	1.000101
1.23000	504.07	-25.4	-47.1	15.8	456.2	608.5	305.8	27.2	1.000100
1.22000	501.07	-25.5	-47.0	16.0	451.0	607.9	306.5	27.5	1.000098
1.21000	499.07	-25.6	-47.0	16.4	459.0	605.4	307.0	27.7	1.000096
1.20000	487.07	-25.7	-47.0	16.4	447.2	605.0	305.9	28.0	1.000095
1.19000	481.07	-25.8	-47.1	16.5	461.5	604.2	305.0	28.5	1.000094
1.18000	479.07	-25.9	-47.1	16.5	460.4	603.7	304.9	29.7	1.000093
1.17000	478.07	-26.0	-47.1	16.5	459.6	603.4	304.7	30.7	1.000092
1.16000	478.07	-26.1	-47.1	16.5	458.7	603.0	304.4	30.7	1.000091

As far as our knowledge goes, no such value can be obtained.

STATION ELEVATION 39,000 FT
LAT. 32°49'45" LONG. 106°37'45"

WEATHER DATA
PRESSURE
WIND SPEED
TEMPERATURE
TABLE 6 (Continued)

GRADUATE ALTITUDE FEET	PRESSURE IN. HGS MERC	TEMPERATURE MILLIBARS HEIGHTS C. IN FEET	RELATIVE HUMIDITY PERCENT	ATM. PRESSURE IN MILLIBARS	ATM. PRESSURE IN MILLIBARS C. IN FEET	ATM. PRESSURE IN MILLIBARS C. IN FEET	DENSITY G/CMICR	SIGHT DISTANCE KILOMETERS	DIRECTION DEGREES	WIND DATA DIRECTION DEGREES	WIND DATA KNOTS	INDEX OF REFRACTION
35000.0	257.0	-38.0	40.0**	323.4	596.2	304.0	31.0	1.00000.5				
36000.0	252.0	-40.1	41.1**	327.0	594.7	304.0	32.9	1.00000.4				
36500.0	246.0	-41.4		370.6	593.1	303.5	34.2	1.00000.3				
37000.0	241.0	-42.7		364.3	591.4	301.6	34.2	1.00000.1				
37500.0	235.0	-44.0		358.0	589.6	299.0	33.6	1.00000.0				
38000.0	230.0	-45.3		351.9	588.1	297.0	31.9	1.00000.0				
38500.0	225.0	-46.6		345.9	586.4	295.0	31.1	1.00000.7				
39000.0	219.0	-47.9		340.0	584.6	294.0	31.1	1.00000.7				
39500.0	214.0	-49.1		334.2	583.1	294.0	30.8	1.00000.4				
40000.0	210.0	-50.4		328.6	581.4	293.1	30.2	1.00000.3				
40500.0	205.0	-51.7		323.0	579.7	295.8	29.6	1.00000.2				
41000.0	200.0	-53.0		317.5	578.0	296.4	29.2	1.00000.1				
41500.0	195.0	-53.4		310.8	577.4	295.8	28.8	1.00000.9				
42000.0	191.0	-54.5		304.9	576.1	294.9	28.5	1.00000.8				
42500.0	186.0	-55.7		299.5	574.4	295.9	28.3	1.00000.7				
43000.0	182.0	-56.9		293.6	572.0	297.9	28.3	1.00000.5				
43500.0	178.0	-58.2		288.4	571.2	295.4	29.2	1.00000.4				
44000.0	175.0	-59.4		285.2	569.6	293.5	30.5	1.00000.5				
44500.0	169.0	-60.6		279.0	568.0	299.4	30.7	1.00000.2				
45000.0	165.0	-61.8		275.0	566.5	301.6	29.8	1.00000.1				
45500.0	161.0	-63.0		267.9	565.0	303.9	28.9	1.00000.0				
46000.0	157.0	-64.3		262.6	563.4	306.4	27.8	1.00000.5				
46500.0	152.0	-65.0		257.4	562.1	307.5	27.5	1.00000.7				
47000.0	150.0	-66.0		252.3	560.7	304.1	28.7	1.00000.6				
47500.0	146.0	-66.3		247.0	559.0	301.9	29.9	1.00000.5				
48000.0	142.0	-67.8		241.9	558.3	302.4	30.5	1.00000.4				
48500.0	139.0	-68.7		236.8	557.1	302.9	31.0	1.00000.3				
49000.0	135.0	-69.0		231.9	555.9	304.0	30.7	1.00000.2				
49500.0	132.0	-70.3		227.0	554.0	305.2	30.3	1.00000.1				
50000.0	128.0	-71.5		222.5	553.4	307.9	28.4	1.00000.0				
50500.0	125.0	-72.2		217.7	552.2	311.1	26.6	1.00000.4				
51000.0	122.0	-73.1		213.1	551.0	315.5	24.0	1.00000.7				

** AT LEAST ONE ASSUMPTION OF WIND AND UFL IN THE INTERPOLATION.

0815 HRS MDT

TABLE 6 (continued)

TEST NUMBER	TEST METHOD	TEST ITEM	TEST RESULTS	TEST DATA			TEST METHOD	TEST ITEM	TEST RESULTS	TEST METHOD	TEST ITEM	TEST RESULTS
				PERCENT METER	GRAMS CUBIC CENTIMETER	GRAMS CUBIC CENTIMETER						
24-004	TEST 1	TEST 1	74.0	20.3	549.3	523.2	TEST 1	TEST 1	21.7	TEST 1	TEST 1	1.0000046
24-005	TEST 1	TEST 1	75.0	20.3	549.9	529.8	TEST 1	TEST 1	16.7	TEST 1	TEST 1	1.0000045
24-006	TEST 1	TEST 1	75.0	19.0	549.0	537.5	TEST 1	TEST 1	18.0	TEST 1	TEST 1	1.0000044
24-007	TEST 1	TEST 1	75.0	19.0	542.7	541.0	TEST 1	TEST 1	16.3	TEST 1	TEST 1	1.0000043
24-008	TEST 1	TEST 1	75.0	19.0	540.2	540.2	TEST 1	TEST 1	14.6	TEST 1	TEST 1	1.0000042
24-009	TEST 1	TEST 1	75.0	19.0	537.5	542.9	TEST 1	TEST 1	13.2	TEST 1	TEST 1	1.0000041
24-010	TEST 1	TEST 1	75.0	19.0	536.7	545.4	TEST 1	TEST 1	12.0	TEST 1	TEST 1	1.0000040
24-011	TEST 1	TEST 1	75.0	19.0	535.0	546.5	TEST 1	TEST 1	11.3	TEST 1	TEST 1	1.0000039
24-012	TEST 1	TEST 1	75.0	19.0	534.3	545.5	TEST 1	TEST 1	11.1	TEST 1	TEST 1	1.0000038
24-013	TEST 1	TEST 1	75.0	19.0	532.0	546.3	TEST 1	TEST 1	10.6	TEST 1	TEST 1	1.0000037
24-014	TEST 1	TEST 1	72.0	16.4	552.1	534.4	TEST 1	TEST 1	10.6	TEST 1	TEST 1	1.0000037
24-015	TEST 1	TEST 1	72.0	159.7	552.2	528.0	TEST 1	TEST 1	9.0	TEST 1	TEST 1	1.0000036
24-016	TEST 1	TEST 1	72.0	153.6	552.3	435.6	TEST 1	TEST 1	8.1	TEST 1	TEST 1	1.0000035
24-017	TEST 1	TEST 1	72.0	151.0	552.5	433.0	TEST 1	TEST 1	8.9	TEST 1	TEST 1	1.0000034
24-018	TEST 1	TEST 1	72.0	147.7	552.6	322.9	TEST 1	TEST 1	9.8	TEST 1	TEST 1	1.0000033
24-019	TEST 1	TEST 1	71.0	143.9	552.7	325.0	TEST 1	TEST 1	10.5	TEST 1	TEST 1	1.0000032
24-020	TEST 1	TEST 1	71.0	140.2	552.6	324.0	TEST 1	TEST 1	11.1	TEST 1	TEST 1	1.0000031
24-021	TEST 1	TEST 1	71.0	136.9	552.9	323.0	TEST 1	TEST 1	11.4	TEST 1	TEST 1	1.0000030
24-022	TEST 1	TEST 1	71.0	133.0	553.0	323.0	TEST 1	TEST 1	11.5	TEST 1	TEST 1	1.0000030
24-023	TEST 1	TEST 1	71.0	129.0	553.2	323.6	TEST 1	TEST 1	11.8	TEST 1	TEST 1	1.0000029
24-024	TEST 1	TEST 1	71.0	125.0	553.9	329.0	TEST 1	TEST 1	12.5	TEST 1	TEST 1	1.0000028
24-025	TEST 1	TEST 1	71.0	122.2	555.2	324.0	TEST 1	TEST 1	13.1	TEST 1	TEST 1	1.0000027
24-026	TEST 1	TEST 1	71.0	118.3	556.4	308.9	TEST 1	TEST 1	13.3	TEST 1	TEST 1	1.0000026
24-027	TEST 1	TEST 1	71.0	115.2	557.0	325.0	TEST 1	TEST 1	13.4	TEST 1	TEST 1	1.0000026
24-028	TEST 1	TEST 1	71.0	111.9	553.3	325.5	TEST 1	TEST 1	13.1	TEST 1	TEST 1	1.0000025
24-029	TEST 1	TEST 1	71.0	108.7	556.0	324.4	TEST 1	TEST 1	12.7	TEST 1	TEST 1	1.0000024
24-030	TEST 1	TEST 1	71.0	105.6	557.1	320.7	TEST 1	TEST 1	12.1	TEST 1	TEST 1	1.0000023
24-031	TEST 1	TEST 1	71.0	102.4	562.5	318.0	TEST 1	TEST 1	11.9	TEST 1	TEST 1	1.0000022
24-032	TEST 1	TEST 1	71.0	99.3	565.3	310.0	TEST 1	TEST 1	11.8	TEST 1	TEST 1	1.0000021
24-033	TEST 1	TEST 1	71.0	97.1	565.7	310.0	TEST 1	TEST 1	11.6	TEST 1	TEST 1	1.0000020
24-034	TEST 1	TEST 1	71.0	94.1	566.1	310.9	TEST 1	TEST 1	11.4	TEST 1	TEST 1	1.0000019
24-035	TEST 1	TEST 1	71.0	91.2	566.2	311.9	TEST 1	TEST 1	11.2	TEST 1	TEST 1	1.0000018
24-036	TEST 1	TEST 1	71.0	89.0	564.9	311.4	TEST 1	TEST 1	11.0	TEST 1	TEST 1	1.0000017

STANDARD COORDINATES

INPUT
OF
REFLECTION
DATA
SPEED
OF
WAVE

11

1. Low Sich 9780 1966-1970
2. Low Sich 9780 1971-1975

SUPPLY AND DEMAND

274000-1

TABLE 6 (continued)

TEST	REFLECTION,	SPEED OF	DIRECTION,	WAVE DATA
NUMBER	ANGLE	VELOCITY	WAVE	WAVE
PRESSURE	ANGLE	WAVE	WAVE	WAVE
0.7.000.0	52.0.0	-62.0.6	-	-
0.3.000.0	51.0.0	-62.0.0	-	-
0.2.000.0	50.0.0	-62.0.1	-	-
0.6.000.0	49.0.1	-61.0.7	-	-
0.7.000.1	48.0.0	-61.0.3	-	-
0.9.000.1	46.0.0	-60.0.8	-	-
1.0.000.0	45.0.0	-60.0.4	-	-
1.1.000.0	44.0.0	-60.0.0	-	-
1.2.000.0	43.0.0	-59.0.6	-	-
1.2.000.0	42.0.0	-59.0.2	-	-
1.2.000.0	41.0.0	-58.0.7	-	-
1.2.000.0	40.0.0	-58.0.3	-	-
1.2.000.0	39.0.0	-57.0.9	-	-
1.2.000.0	38.0.0	-57.0.5	-	-
1.2.000.0	37.0.0	-57.0	-	-
1.2.000.0	36.0.0	-56.0.6	-	-
1.2.000.0	35.0.0	-56.0.2	-	-
1.2.000.0	34.0.0	-56.0.1	-	-
1.2.000.0	33.0.0	-55.0.3	-	-
1.2.000.0	32.0.0	-54.0.9	-	-
1.2.000.0	31.0.0	-52.0.7	-	-
1.2.000.0	30.0.0	-52.0.4	-	-
1.2.000.0	29.0.0	-52.0.1	-	-
1.2.000.0	28.0.0	-51.0.9	-	-
1.2.000.0	27.0.0	-51.0.6	-	-
1.2.000.0	26.0.0	-51.0.3	-	-
1.2.000.0	25.0.0	-51.0.0	-	-
1.2.000.0	24.0.0	-50.0.7	-	-
1.2.000.0	23.0.0	-50.0.4	-	-
1.2.000.0	22.0.0	-50.0.1	-	-
1.2.000.0	21.0.0	-49.0.8	-	-
1.2.000.0	20.0.0	-49.0.5	-	-
1.2.000.0	19.0.0	-49.0.2	-	-
1.2.000.0	18.0.0	-48.0.9	-	-
1.2.000.0	17.0.0	-48.0.6	-	-
1.2.000.0	16.0.0	-48.0.3	-	-
1.2.000.0	15.0.0	-47.0.0	-	-
1.2.000.0	14.0.0	-46.0.7	-	-
1.2.000.0	13.0.0	-45.0.4	-	-
1.2.000.0	12.0.0	-44.0.1	-	-
1.2.000.0	11.0.0	-43.0.8	-	-
1.2.000.0	10.0.0	-42.0.5	-	-
1.2.000.0	9.0.0	-41.0.2	-	-
1.2.000.0	8.0.0	-40.0.9	-	-
1.2.000.0	7.0.0	-39.0.6	-	-
1.2.000.0	6.0.0	-38.0.3	-	-
1.2.000.0	5.0.0	-37.0.0	-	-
1.2.000.0	4.0.0	-36.0.7	-	-
1.2.000.0	3.0.0	-35.0.4	-	-
1.2.000.0	2.0.0	-34.0.1	-	-
1.2.000.0	1.0.0	-33.0.8	-	-
1.2.000.0	0.0.0	-32.0.5	-	-

JULY 1964
0815 HRS MDT
ROUTE 54, 1000' ASL

TABLE 6 (continued)

TIME	DEPT.	DEPT. DISTANCE	DEPT. DENSITY	DEPT. DEPT. DISTANCE	DIR. CLOUDS	WIND DATA	INDEX
ALTIMETER	ALTIMETER	DEPT. DISTANCE	DEPT. DEPT. DISTANCE	DEPT. DEPT. DISTANCE	DEGREES	SPEED KNOTS	OR FRACTION,
35.000	24.7	-43.3	.	35.3	565.5	57.6	1.0000009
34.000	24.1	-43.3	.	37.4	565.0	28.4	1.0000008
34.000	24.0	-43.7	.	36.5	565.0	53.9	1.0000008
35.000	24.0	-42.7	.	35.7	565.7	61.0	1.0000008
35.000	24.0	-43.7	.	34.9	565.4	9.8	1.0000008
35.000	24.0	-43.0	.	36.1	565.7	67.3	1.0000008
35.000	24.0	-43.0	.	35.3	565.8	71.8	8.4
37.000	24.4	-43.0	.	32.6	565.8	79.7	8.0
37.000	24.5	-43.5	.	31.8	565.9	63.6	1.0000007
37.000	24.5	-43.5	.	31.1	565.9	97.6	7.9
37.000	24.6	-43.2	.	30.3	564.3	104.3	7.2
37.000	24.7	-47.3	.	29.2	564.7	111.2	6.0
37.000	24.7	-47.0	.	24.9	565.1	121.0	4.8
37.000	24.5	-47.3	.	23.2	565.2	127.3	4.4
37.000	24.7	-47.3	.	27.0	565.4	114.1	5.2
37.000	24.7	-45.7	.	26.9	566.2	105.0	6.3
37.000	24.7	-45.4	.	25.3	566.6	93.7	7.5
37.000	24.7	-45.1	.	25.0	567.0	95.0	8.2
37.000	24.5	-45.3	.	25.0	567.4	33.3	9.0
37.000	24.5	-45.3	.	24.4	567.6	34.3	1.0000015
37.000	24.5	-45.2	.	23.9	568.2	104.6	1.0000015
37.000	24.5	-44.9	.	23.5	568.5	25.3	1.0000015
37.000	24.5	-44.9	.	22.7	569.0	22.7	1.0000015
37.000	24.5	-44.5	.	22.2	569.4	1.0000015	

Tallinn, Estonia, 30°58' N, 25°18' E
4000 ft.
1000 mb
1000 mb

CHARTS FOR LAT 40°

27000 ft

25000 ft

AIR TEMPERATURE COORDINATES
32°40' N LAT 40°
1000 mb 37000 ft

TABLE 7

PRESSURE (MB)	DEGREES FAHRENHEIT	TEMPERATURE OF WIND	WIND DIRECTION DEGREES CIRCULAR	WIND VELOCITY DEGREES (FT.)	WIND VELOCITY KNOTS
600.0	59.36.	20.1	8.8	4.3	6.4
800.0	63.09.	18.8	3	82.1	9.7
750.0	86.15.	15.6	77.4	98.2	13.7
700.0	105.17.	11.0	-11.7	19.	14.5
650.0	125.26.	6.1	-10.0	28.	78.4
600.0	146.63.	4.2	-19.5	16.	91.1
550.0	169.69.	.5	-23.5	15.	14.7
500.0	194.54.	-2.1	-23.4	14.	20.0
450.0	221.34.	-12.1	-34.1	14.	31.5
400.0	250.59.	-17.6	-33.5	14.	29.5
370.0	283.33.	-23.0	-42.7	14.	13.7
350.0	319.57.	-39.5	-49.0	10.	21.0
250.0	361.18.	-40.6	-40.6	304.0	35.5
200.0	403.70.	-55.2	-55.2	296.2	29.1
175.0	457.60.	-59.0	-59.0	298.4	30.1
150.0	463.77.	-66.0	-66.0	304.4	28.7
125.0	524.51.	-72.4	-72.4	311.7	26.3
100.0	547.74.	-72.5	-72.5	352.3	11.4
80.0	590.45.	-71.8	-71.8	53.0	11.4
75.0	610.38.	-69.4	-69.4	60.4	13.2
60.0	646.05.	-64.1	-64.1	72.7	10.1
50.0	683.77.	-62.0	-62.0	95.3	10.1
40.0	723.47.	-58.1	-58.1	83.9	9.6
35.0	739.51.	-55.3	-55.3	49.2	11.2
25.0	823.32.	-49.1	-49.1	57.0	13.7
20.0	873.36.	-43.5	-43.5	97.7	7.9
15.0	933.00.	-44.7	-44.7		

** ALL LAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

7 JULY 1963 0745 HRS MDT
32° 09' N LAT 106° 09' W LONG

SIGHTING COORDINATES
2700' AGL
MOUNTAIN

GEODETIC COORDINATES
32° 09' 00" LAT 106° 09' 00" LONG

TABLE 8.

REF. STATION	REF. TRIG	REF. STATION	REF. STATION	R.L. height. P.R.C.L.T.
112.1	112.6	12.5	10.9	30.0
112.0	112.7	12.5	10.9	30.0
111.8	111.8	21.5	19.5	30.0
111.2	112.0	21.5	19.5	30.0
110.9	110.9	21.5	19.5	30.0
110.6	110.6	21.5	19.5	30.0
110.3	110.3	21.5	19.5	30.0
110.0	110.3	21.5	19.5	30.0
109.7	109.6	21.5	19.5	30.0
109.4	109.3	21.5	19.5	30.0
109.1	109.0	21.5	19.5	30.0
108.8	108.6	21.5	19.5	30.0
108.5	108.3	21.5	19.5	30.0
108.2	108.0	21.5	19.5	30.0
107.9	107.6	21.5	19.5	30.0
107.6	107.3	21.5	19.5	30.0
107.3	107.0	21.5	19.5	30.0
107.0	106.6	21.5	19.5	30.0
106.7	106.3	21.5	19.5	30.0
106.4	106.0	21.5	19.5	30.0
106.1	105.6	21.5	19.5	30.0
105.8	105.3	21.5	19.5	30.0
105.5	105.0	21.5	19.5	30.0
105.2	104.6	21.5	19.5	30.0
104.9	104.6	21.5	19.5	30.0
104.6	104.3	21.5	19.5	30.0
104.3	104.0	21.5	19.5	30.0
104.0	103.6	21.5	19.5	30.0
103.7	103.3	21.5	19.5	30.0
103.4	103.0	21.5	19.5	30.0
103.1	102.6	21.5	19.5	30.0
102.8	102.3	21.5	19.5	30.0
102.5	102.1	21.5	19.5	30.0
102.2	101.8	21.5	19.5	30.0
101.9	101.4	21.5	19.5	30.0
101.6	101.0	21.5	19.5	30.0
101.3	100.6	21.5	19.5	30.0
101.0	100.0	21.5	19.5	30.0
100.7	99.3	21.5	19.5	30.0
100.4	98.5	21.5	19.5	30.0
100.1	97.6	21.5	19.5	30.0
99.8	96.8	21.5	19.5	30.0
99.5	95.9	21.5	19.5	30.0
99.2	95.0	21.5	19.5	30.0
98.9	94.0	21.5	19.5	30.0
98.6	93.0	21.5	19.5	30.0
98.3	92.0	21.5	19.5	30.0
98.0	91.0	21.5	19.5	30.0
97.7	90.0	21.5	19.5	30.0
97.4	89.0	21.5	19.5	30.0
97.1	88.0	21.5	19.5	30.0
96.8	87.0	21.5	19.5	30.0
96.5	86.0	21.5	19.5	30.0
96.2	85.0	21.5	19.5	30.0
95.9	84.0	21.5	19.5	30.0
95.6	83.0	21.5	19.5	30.0
95.3	82.0	21.5	19.5	30.0
95.0	81.0	21.5	19.5	30.0
94.7	80.0	21.5	19.5	30.0
94.4	79.0	21.5	19.5	30.0
94.1	78.0	21.5	19.5	30.0
93.8	77.0	21.5	19.5	30.0
93.5	76.0	21.5	19.5	30.0
93.2	75.0	21.5	19.5	30.0
92.9	74.0	21.5	19.5	30.0
92.6	73.0	21.5	19.5	30.0
92.3	72.0	21.5	19.5	30.0
92.0	71.0	21.5	19.5	30.0
91.7	70.0	21.5	19.5	30.0
91.4	69.0	21.5	19.5	30.0
91.1	68.0	21.5	19.5	30.0
90.8	67.0	21.5	19.5	30.0
90.5	66.0	21.5	19.5	30.0
90.2	65.0	21.5	19.5	30.0
89.9	64.0	21.5	19.5	30.0
89.6	63.0	21.5	19.5	30.0
89.3	62.0	21.5	19.5	30.0
89.0	61.0	21.5	19.5	30.0
88.7	60.0	21.5	19.5	30.0
88.4	59.0	21.5	19.5	30.0
88.1	58.0	21.5	19.5	30.0
87.8	57.0	21.5	19.5	30.0
87.5	56.0	21.5	19.5	30.0
87.2	55.0	21.5	19.5	30.0
86.9	54.0	21.5	19.5	30.0
86.6	53.0	21.5	19.5	30.0
86.3	52.0	21.5	19.5	30.0
86.0	51.0	21.5	19.5	30.0
85.7	50.0	21.5	19.5	30.0
85.4	49.0	21.5	19.5	30.0
85.1	48.0	21.5	19.5	30.0
84.8	47.0	21.5	19.5	30.0
84.5	46.0	21.5	19.5	30.0
84.2	45.0	21.5	19.5	30.0
83.9	44.0	21.5	19.5	30.0
83.6	43.0	21.5	19.5	30.0
83.3	42.0	21.5	19.5	30.0
83.0	41.0	21.5	19.5	30.0
82.7	40.0	21.5	19.5	30.0
82.4	39.0	21.5	19.5	30.0
82.1	38.0	21.5	19.5	30.0
81.8	37.0	21.5	19.5	30.0
81.5	36.0	21.5	19.5	30.0
81.2	35.0	21.5	19.5	30.0
80.9	34.0	21.5	19.5	30.0
80.6	33.0	21.5	19.5	30.0
80.3	32.0	21.5	19.5	30.0
80.0	31.0	21.5	19.5	30.0
79.7	30.0	21.5	19.5	30.0
79.4	29.0	21.5	19.5	30.0
79.1	28.0	21.5	19.5	30.0
78.8	27.0	21.5	19.5	30.0
78.5	26.0	21.5	19.5	30.0
78.2	25.0	21.5	19.5	30.0
77.9	24.0	21.5	19.5	30.0
77.6	23.0	21.5	19.5	30.0
77.3	22.0	21.5	19.5	30.0
77.0	21.0	21.5	19.5	30.0
76.7	20.0	21.5	19.5	30.0
76.4	19.0	21.5	19.5	30.0
76.1	18.0	21.5	19.5	30.0
75.8	17.0	21.5	19.5	30.0
75.5	16.0	21.5	19.5	30.0
75.2	15.0	21.5	19.5	30.0
74.9	14.0	21.5	19.5	30.0
74.6	13.0	21.5	19.5	30.0
74.3	12.0	21.5	19.5	30.0
74.0	11.0	21.5	19.5	30.0
73.7	10.0	21.5	19.5	30.0
73.4	9.0	21.5	19.5	30.0
73.1	8.0	21.5	19.5	30.0
72.8	7.0	21.5	19.5	30.0
72.5	6.0	21.5	19.5	30.0
72.2	5.0	21.5	19.5	30.0
71.9	4.0	21.5	19.5	30.0
71.6	3.0	21.5	19.5	30.0
71.3	2.0	21.5	19.5	30.0
71.0	1.0	21.5	19.5	30.0
70.7	0.0	21.5	19.5	30.0

STATION: MOUNTAIN 4126.00 Elevation
36° 34' P. D.
ASL. 10.10. 301
0745 HRS MDT

SIGHTING LEVEL DATA
27 JULY 50
HOTEL A.D.

GEODETIC COORDINATES
52.8965 LA. 116.
106.0965 LO. 116.

TABLE 8 (continued)

PRESSURE OF AIR, IN. MILLIMETERS	TEMPERATURE OF AIR, °C DEGREES CELSIUS	HUMIDITY, PERCENT.
20.0	0.064.5	-49.3
10.0	10.558.3	-42.2

0745 HRS MDT
ANCER SAWN 140.

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TABLE 9.

רְגָדְלִים כְּסֵדֶלֶת אַמְּנָה לְבָבָךְ

TABLE X
WIND DATA
**FOR CLOUD
 SCREENS**

• 0	1.000299
119.5	1.000302
119.5	2.3
119.5	3.6
118.4	4.6
112.0	5.7
105.0	6.1
95.7	5.6
87.1	6.0
61.7	7.0
78.5	7.4
75.8	7.7
67.8	7.9
59.0	8.3
50.2	9.3
48.7	11.1
57.8	14.1
66.0	17.3
73.2	20.7
77.2	19.0
81.0	16.0
84.2	12.1
89.1	9.3
95.2	9.8
101.0	12.7
105.6	18.4
105.9	23.0
107.5	27.1
105.3	27.1
102.4	26.5
97.4	26.9
91.5	28.2

STATION ALTITUDE 4126.59 FEET MSL
30 SEP 1951 0745 HRS MDT

UPPER AIR DATA
2710010300
100LL0400

JULIETT COORDINATES
32.88865 LAT LEG
116.09965 LON LEG

TABLE 9 (continued)

GEODETIC PRESSURE	REL. PRESSURE	AIR TEMP.	DEWPOINT	REL. HUM. PERCENT	DEPTH OF JOURNAL	WIND DATA	INDEX
ALTIMETER	ATMOSPHERIC	DEGREES URGLES CENTIGRADS	MILLIBARS	METER	INCHES	DIRECTION DEGREES (10)	OF REFRACTION
26000.0	491.1	-58.2	-37.0	13.0	640.4	636.7	30.9
25910.0	491.2	-78.3	-57.9	13.0	639.8	635.5	30.9
25810.0	472.1	-38.4	-31.9	13.0	621.1	635.9	32.3
25710.0	462.9	-9.5	-52.3	13.0	611.7	632.6	33.3
25610.0	453.9	-10.7	-53.7	13.0	602.3	631.2	34.1
25510.0	445.0	-11.9	-34.6	13.0	593.2	629.8	31.3
25410.0	436.3	-13.0	-35.4	13.2	584.0	625.4	29.1
25310.0	427.0	-14.2	-35.1	13.5	575.0	627.0	28.0
25210.0	419.1	-15.3	-36.3	13.8	566.2	625.6	27.1
25110.0	410.4	-16.5	-37.7	14.0	557.5	624.2	27.0
25010.0	402.2	-17.7	-38.9	14.0	548.9	622.7	27.0
24910.0	394.4	-18.7	-39.9	14.0	539.8	621.5	27.0
24810.0	386.3	-19.5	-40.1	14.0	530.0	620.5	27.0
24710.0	378.5	-20.4	-40.8	14.0	521.5	619.4	27.0
24610.0	370.7	-21.2	-41.5	14.0	512.6	616.4	27.0
24510.0	363.2	-22.1	-42.2	14.0	503.9	617.5	26.5
24410.0	355.9	-22.9	-42.9	14.0	495.3	616.3	26.5
24310.0	348.5	-23.8	-43.6	14.0	486.9	615.2	26.5
24210.0	341.4	-24.7	-44.4	14.0	478.6	614.1	26.4
24110.0	334.5	-25.7	-45.2	14.0	470.5	612.9	26.4
24010.0	327.5	-26.7	-46.1	14.0	462.6	611.6	26.4
23910.0	320.4	-27.8	-46.9	14.0	454.9	610.3	26.4
23810.0	313.7	-28.8	-47.4	14.0	447.3	609.0	26.4
23710.0	307.2	-29.3	-48.0	14.0	439.6	607.7	26.4
23610.0	300.4	-30.9	-49.5	14.0	432.4	606.4	26.4
23510.0	294.5	-31.9	-51.1	12.5*	425.0	605.1	26.4
23410.0	288.0	-33.0	-51.3	10.3**	417.7	604.7	26.4
23310.0	281.4	-34.1	-56.3	8.4**	410.6	602.4	26.4
23210.0	275.7	-35.1	-59.3	6.4**	403.5	601.1	26.4
23110.0	269.3	-36.2	-62.9	4.4**	396.0	599.7	26.4
23010.0	264.1	-37.3	-67.3	2.5**	389.6	598.4	26.5
22910.0	258.5	-38.3	-71.7	0.5**	383.2	597.0	26.5

* AT LEAST ONE MEASUREMENT RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

0745 HRS MDT

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TABLE 9 (continued)

GEODETIC COORDINATES

REL. HUM.	DEFINITY PERCENT	SILTS OF SOILS	WIND DATA	INDEX OF REFRACTION
60-70	60-70	DILUTE SILTS	DILUTE WIND SPEED AT GROUND	KNOTS

1	0.000046	1	0.000047
1	0.000048	1	0.000049
1	0.000050	1	0.000051
1	0.000052	1	0.000053
1	0.000054	1	0.000055
1	0.000056	1	0.000057
1	0.000058	1	0.000059
1	0.000060	1	0.000061
1	0.000062	1	0.000063
1	0.000064	1	0.000065
1	0.000066	1	0.000067
1	0.000068	1	0.000069
1	0.000070	1	0.000071
1	0.000072	1	0.000073
1	0.000074	1	0.000075
1	0.000076	1	0.000077
1	0.000078	1	0.000079
1	0.000080	1	0.000081
1	0.000082	1	0.000083

STATION ALTITUDE 11200.53 FT MSL
30° P. S.
ASST. STATION NO. 309
0745 HRS MDT

INPUT AIR DATA
274°F/10.3°C
101.5" Hg

GEODETIC COORDINATES
32.88865 LAT LEG
106.09965 LON LEG

TABLE 9 (continued)

GEODETIC ALTITUDE FEET	PRESSURE ALTITUDE FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL.HUM. PERCENT	REL.HUM. GM/CMIC	SPEED OF WIND DATA METER KNOTS	DIRECTION DEGREES (TR) DEGREES (TR)	SPEED KNOTS	INDEX OF REFRACTION
12000.0	11200.53	-73.1	•	203.4	551.0	321.8	19.9	1.000045
12000.0	1130.4	-73.5	•	128.0	550.4	319.3	15.1	1.000044
12000.0	110.9	-74.0	•	173.9	549.8	314.6	10.4	1.000043
12000.0	106.1	-73.8	•	149.8	549.0	319.6	8.4	1.000042
12000.0	105.5	-75.4	•	183.6	550.0	320.5	6.6	1.000041
12000.0	102.6	-73.0	•	178.6	551.2	341.8	7.4	1.000040
12000.0	100.7	-72.6	•	173.7	551.7	351.5	9.0	1.000039
12000.0	97.0	-72.4	•	169.1	552.0	35.5	10.0	1.000038
12000.0	95.0	-72.1	•	164.6	552.4	9.7	10.8	1.000037
12000.0	92.0	-71.9	•	160.2	552.7	17.3	11.7	1.000036
12000.0	90.2	-71.7	•	156.0	553.0	23.5	12.2	1.000035
12000.0	87.9	-71.4	•	151.8	553.3	29.3	12.7	1.000034
12000.0	85.7	-71.2	•	147.6	553.6	30.4	12.2	1.000033
12000.0	83.5	-71.3	•	144.2	553.5	30.5	11.4	1.000032
12000.0	81.4	-71.7	•	147.8	553.9	31.5	10.9	1.000031
12000.0	79.5	-72.1	•	137.4	552.5	34.1	10.9	1.000031
12000.0	77.3	-72.4	•	134.2	552.0	36.8	11.0	1.000030
12000.0	75.4	-72.8	•	131.0	551.4	40.0	10.9	1.000029
12000.0	73.0	-71.7	•	127.1	552.7	43.2	10.9	1.000028
12000.0	71.6	-70.9	•	123.3	554.0	47.9	10.6	1.000027
12000.0	69.8	-70.0	•	119.7	555.2	53.2	10.4	1.000027
12000.0	68.1	-69.4	•	116.4	556.1	55.0	10.4	1.000026
12000.0	66.4	-69.3	•	113.2	556.9	55.2	10.6	1.000025
12000.0	64.8	-68.2	•	110.0	557.8	54.5	10.7	1.000024
12000.0	63.2	-67.6	•	107.0	558.0	54.8	10.8	1.000024
12000.0	61.6	-66.9	•	104.1	559.5	55.3	10.8	1.000023
12000.0	60.1	-66.3	•	101.2	560.3	57.5	10.8	1.000023
12000.0	58.6	-65.7	•	98.4	561.2	62.6	10.7	1.000022
12000.0	57.2	-65.0	•	95.7	562.0	69.0	10.7	1.000021
12000.0	55.8	-64.4	•	93.1	562.8	72.9	10.7	1.000021
12000.0	54.4	-63.8	•	90.5	563.7	75.5	10.6	1.000020
12000.0	53.0	-63.2	•	88.0	564.5	76.5	10.7	1.000019

STATION NUMBER 412659 FEB 1 MSL
 30° 40' N 72° 07' W 0745 HRS MDT
 ASCE, STAN. 30. 30.

UPPER AIR DATA
 2740010300
 4000' AGL

GEODETIC COORDINATES
 32.8865 LAT deg
 106.0965 LON deg

TABLE 9 (continued)

CHG IN TRLC	PRESURE	TEMP (ATLANTIC)	REL.HUM. AT 1000 FT	PERCENT CLOUD COVER	WIND DATA	INDEX OF REFRACTION
AT 1000 FT	AL	ATLANTIC	AT 1000 FT	PERCENT CLOUD COVER	DIRECTION DEGREES	SPEED KNOTS
0.0000.0	51.7	-62.6	85.6	565.4	61.9	11.1
0.0000.2	50.5	-61.9	83.2	566.2	85.1	11.5
0.0000.5	49.2	-61.3	91.0	567.0	92.5	12.0
0.0000.8	48.1	-60.8	73.9	567.7	101.4	12.6
0.0001.0	48.9	-60.2	76.8	568.5	109.3	13.5
0.0001.3	48.7	-59.7	74.7	569.2	110.9	11.8
0.0001.5	48.5	-59.1	72.6	570.0	113.1	10.2
0.0001.8	48.3	-58.5	70.9	570.7	110.6	8.5
0.0002.0	48.1	-58.0	69.0	571.5	92.6	7.2
0.0002.3	47.9	-57.4	67.2	572.2	69.9	6.8
0.0002.5	47.7	-56.9	65.4	572.9	57.6	7.4
0.0002.8	47.5	-56.4	63.7	573.6	58.0	8.1
0.0003.0	47.3	-56.2	62.2	573.8	59.4	8.9
0.0003.3	47.1	-56.1	60.7	574.6	60.9	9.1
0.0003.5	46.9	-55.9	59.2	574.2	65.6	8.9
0.0003.8	46.7	-55.8	57.6	574.4	70.3	8.0
0.0004.0	46.5	-55.6	56.4	574.9	65.5	9.0
0.0004.3	46.3	-55.5	55.0	574.8	55.6	9.5
0.0004.5	46.1	-55.3	53.7	575.0	47.0	10.3
0.0004.8	45.9	-55.2	52.4	575.2	44.3	11.0
0.0005.0	45.7	-55.0	51.1	575.4	42.9	11.7
0.0005.3	45.5	-54.9	49.9	575.6	43.5	12.3
0.0005.5	45.3	-54.7	48.7	575.8	47.0	12.2
0.0005.8	45.1	-54.5	47.5	576.0	54.2	11.9
0.0006.0	44.9	-54.3	46.4	576.4	61.0	11.8
0.0006.3	44.7	-54.2	45.2	576.8	65.1	11.8
0.0006.5	44.5	-53.9	44.1	577.2	69.6	11.8
0.0006.8	44.3	-53.8	43.0	577.0	63.0	11.9
0.0007.0	44.1	-53.6	42.0	578.0	69.4	11.9
0.0007.3	43.9	-52.7	41.0	578.4	79.6	11.8
0.0007.5	43.7	-52.4	41.0	579.0	71.0	11.7
0.0007.8	43.5	-52.1	40.0	579.2	75.0	11.5

STATION ALTITUDE 4126.59 FT 1451
30 P. 19 0745 HRS MDT
ASSEMBLY NO. 360

UPPER AIR LINE
270010500
HOLLONAI

GEODETIC COORDINATES
32.66865 LAT LEG
106.09465 LONG LEG

TABLE 9 (continued)

GEODETIC ALTITUDE	PRESSURE	TEMPERATURE	REL.HUM.	DENSITY	SPEED OF WIND DATA	INDEX OF REFRACTION
ASSEMBLY NO.	DEGREES CENTIGRADE	AIR DEGREES CENTIGRADE	PERCENT GM/CURIE METER	SHFT OF SOUND KNOTS	DIRECTION, DEGREES(CN)	KNOTS
24000.0	24.2	-51.8	35.0	579.6	70.2	10.9
25000.0	25.6	-51.5	37.1	580.0	79.4	10.4
26000.0	25.1	-51.2	36.2	580.4	85.0	9.8
27000.0	22.5	-59.9	36.3	580.8	84.1	9.7
28000.0	22.0	-50.6	34.5	581.2	84.9	9.5
29000.0	21.5	-50.3	33.6	581.6	85.6	9.3
30000.0	21.0	-49.9	32.8	582.0	84.0	9.1
31000.0	20.5	-49.6	32.0	582.4	82.4	8.8
32000.0	20.1	-49.3	31.2	582.8	80.2	8.5
33000.0	19.6	-49.1	30.5	583.1	78.9	8.1
34000.0	19.2	-48.9	29.8	583.4	72.2	7.6
35000.0	18.7	-48.6	29.1	583.7	66.9	7.1
36000.0	18.3	-48.4	28.4	584.0	60.9	6.7
37000.0	17.9	-48.2	27.7	584.3	55.0	6.6
38000.0	17.5	-47.9	27.1	584.6	53.7	6.7
39000.0	17.1	-47.7	26.4	584.9	50.9	6.8
40000.0	16.7	-47.5	25.8	585.2	48.2	6.9
42500.0	16.4	-47.2	25.2	585.5	51.9	6.7
45000.0	16.0	-47.0	24.6	585.8	58.3	6.4
47500.0	15.6	-46.9	24.1	586.1	65.4	6.1
50000.0	15.3	-46.5	23.5	586.4	72.9	6.0
52500.0	14.9	-46.3	22.9	586.7	78.9	5.5
55000.0	14.6	-46.1	22.4	587.0	85.7	5.0
57500.0	14.3	-45.9	21.9	587.3	93.9	4.6
60000.0	14.0	-45.6	21.4	587.6	105.4	4.3
62500.0	13.6	-45.4	20.9	587.9	85.9	3.3
65000.0	13.3	-45.2	20.4	588.2	57.3	2.7
67500.0	13.0	-44.9	19.9	588.5	20.0	3.1
70000.0	12.7	-44.7	19.4	588.8	59.9	3.9
72500.0	12.5	-44.5	19.0	589.1	591.3	4.6
75000.0	12.2	-44.2	18.5	589.4	540.7	5.4
77500.0	11.9	-44.0	18.1	589.7	535.3	6.4

Cloudiness, Actual 0.00
At 0745 HRS MDT
Actual 0.00

100% AERIAL
27000 ft. 3000
miles from

GEODETIC COORDINATES
32.88865 LAT DEG
106.09965 LON DEG

TABLE 9 (continued)

of Clouds	Precip. Rate	Horizontal Dist.	Vertical Dist.	Percent Cloud Cover	Altitude Clouds	Sight Distance Clouds	Sight Distance Ground	Actual Data	Actual Data	Index of Refraction
At Latitude	At Altitude	At Latitude	At Altitude	At Altitude	At Altitude	At Altitude	At Altitude	At Altitude	At Altitude	At Altitude
100.000	11.0	-4.50.0	-	-	11.0	17.7	240.0	1.000004	1.000004	1.000004
100.000	11.0	-4.50.0	-	-	11.0	17.3	290.3	1.000004	1.000004	1.000004
100.000	11.0	-4.50.0	-	-	11.0	16.9	290.0	1.000004	1.000004	1.000004
100.000	11.0	-4.50.0	-	-	11.0	16.5	299.9	1.000004	1.000004	1.000004
100.000	10.0	-4.50.1	-	-	10.0	16.1	291.2	1.000004	1.000004	1.000004
100.000	10.0	-4.50.1	-	-	10.0	15.7	291.5	1.000003	1.000003	1.000003
100.000	10.0	-4.50.1	-	-	10.0	15.3	291.6	1.000003	1.000003	1.000003
100.000	11.0	-4.50.0	-	-	11.0	17.7	240.0	1.000004	1.000004	1.000004
100.000	11.0	-4.50.0	-	-	11.0	17.3	290.3	1.000004	1.000004	1.000004
100.000	11.0	-4.50.0	-	-	11.0	16.9	290.0	1.000004	1.000004	1.000004
100.000	11.0	-4.50.0	-	-	11.0	16.5	299.9	1.000004	1.000004	1.000004
100.000	10.0	-4.50.1	-	-	10.0	16.1	291.2	1.000004	1.000004	1.000004
100.000	10.0	-4.50.1	-	-	10.0	15.7	291.5	1.000003	1.000003	1.000003
100.000	10.0	-4.50.1	-	-	10.0	15.3	291.6	1.000003	1.000003	1.000003

STATION LATITUDE 41°26.59' N EET MSL
30° P. S.
ASCLINATION: NO. 30°

MANDATORY LEVELS
2740n1030u
HOLLOWMAN
TABLE 10.

GEODAETIC COORDINATES
32.86665 LAT DEG
106.09965 LON DEG

PRESSURE GEOPOTENTIAL MILLIBARS	FEET	TEMPERATURE DEGREES CENIGRADE	WIND DATA DIRECTION DEGREES (TH)	SPEED KNOTS	Mandatory Levels	
					1000	1000
850.0	5108.	21.9	14.5	63.	119.5	2.6
800.0	6833.	20.8	-8	24.	108.5	0.3
750.0	8046.	16.1	-2.1	29.	80.5	7.3
700.0	10551.	11.1	-4.2	34.	50.4	0.4
650.0	12562.	6.3	-9.0	32.	67.2	17.7
600.0	14705.	4.5	-20.7	14.	85.9	10.4
550.0	17015.	1.8	-25.6	15.	107.0	23.3
500.0	18644.	-5.1	-29.2	15.	91.2	20.3
450.0	22177.	-11.2	-34.1	15.	78.8	28.6
400.0	25114.	-16.1	-39.0	14.	87.4	27.1
350.0	28352.	-23.6	-43.5	14.	353.3	6.2
300.0	31305.	-31.0	-49.6	14.	302.5	31.5
250.0	36161.	-39.2	,	298.0	39.2	
200.0	41035.	-52.5	,	299.0	38.2	
175.0	43825.	-59.0	,	299.0	37.4	
150.0	46905.	-65.5	,	302.7	35.7	
125.0	50535.	-71.1	,	317.6	25.9	
100.0	54026.	-72.6	,	351.0	6.9	
80.0	59144.	-71.9	,	33.1	10.9	
70.0	61727.	-70.1	,	52.3	10.4	
60.0	64763.	-66.3	,	57.1	10.8	
50.0	68428.	-61.7	,	80.1	11.7	
40.0	73018.	-56.5	,	57.3	7.6	
30.0	79035.	-54.6	,	52.1	12.0	
25.0	82395.	-52.2	,	72.4	11.6	
20.0	87654.	-49.3	,	80.1	6.5	
15.0	93343.	-46.4	,	70.0	5.7	
10.0	102401.	-42.2	,			

141000-141100 141100-141200
141200-141300 141300-141400
141400-141500 141500-141600

0850 HRS MDT

TABLE II.
MATERIAL TESTED FOR IC
AT 0850 HRS MDT

AT 0850 HRS MDT
TESTED
FOR IC

ITEM TESTED FOR IC	AT 0850 HRS MDT	TEMPERATURE AT WHICH IC OCCURRED	PERCENT OF GELATION	PERCENT DETERIORATION
181200	9.051.0	17.1	0.6	0.0
191300	9.064.6	20.0	7.7	5.0
191600	9.072.5	18.0	6.2	4.0
191800	9.033.5	19.9	6.0	4.0
192000	1.052.9	10.5	6.0	3.0
192500	1.033.9	5.6	5.0	3.0
192600	1.061.9	5.0	19.1	17.0
192700	1.039.5	4.5	2.0	1.0
192800	1.039.6	2.6	29.9	1.0
192800	1.058.5	2.5	26.1	10.0
193000	1.097.6	5.5	52.4	10.0
193000	2.120.7	0.7	34.0	11.0
193300	2.105.6	10.0	36.0	10.0
193900	2.039.7	18.2	42.0	10.0
193900	2.370.2	20.0	43.0	11.0
194000	2.761.8	23.0	45.0	11.0
194100	2.650.7	27.5	43.0	11.0
194200	3.137.5	31.4	49.0	11.0
194300	3.014.5	49.0	49.0	11.0
194400	9.111.4	53.0	49.0	11.0
194500	4.515.7	62.4	52.0	11.0
194600	4.004.1	65.5	52.0	11.0
194700	4.753.1	67.0	52.0	11.0
194800	5.050.9	71.0	52.0	11.0
194900	5.557.7	73.0	52.0	11.0
195000	5.456.2	71.1	52.0	11.0
195100	6.105.2	69.0	52.0	11.0
195200	6.160.5	61.0	52.0	11.0
195300	7.251.6	57.0	52.0	11.0
195400	7.125.4	55.0	52.0	11.0

STATION ALTITUDE 4651.00 FEET MSL
 50° 25' P. 02 0850 HRS MDT
 ASLT SALT 40. 207

WEATHER DATA
 2700030207
 JUN 1961

TABLE 12.

GEOPHYSIC ALTITUDE	PRESSURE	TEMPERATURE	EL. ELEV.	DEFINITION	SPEED OF	WIND DATA	INDEX
ASLT FT	IN MILLIBARS	AIR DEGREES	DEGREES	PERCENT	GEOMORPHIC	DIRECTION	OF
					SOUTH	DEGREES	REFRACTION
4000.0	1012.0	17.1	0.3	59.0	1053.9	065.3	•0
4500.0	980.5	19.2	3.1	49.5	1079.9	007.7	.6
5000.0	953.2	19.0	5.9	42.0	1010.1	066.3	1.7
5500.0	935.3	19.7	4.3	36.3	975.4	018.0	2.6
6000.0	925.6	19.6	1.7	50.2	976.9	101.5	3.2
6500.0	909.1	19.5	-1.5	24.2	960.7	067.3	1.500248
7000.0	894.9	19.2	-4.0	19.2	915.2	115.9	4.0
7500.0	870.7	16.2	-4.3	20.7	890.6	120.0	4.4
8000.0	850.3	16.7	-4.9	22.3	932.5	005.4	129.2
8500.0	835.1	15.4	-5.1	23.8	907.2	062.5	135.9
9000.0	819.6	14.2	-5.4	25.5	884.9	011.0	134.9
9500.0	802.4	12.9	-5.7	26.9	882.8	059.6	122.7
10000.0	781.5	11.6	-6.1	28.4	871.0	058.1	98.9
10500.0	760.8	10.4	-6.5	29.9	859.3	056.6	80.1
11000.0	739.6	9.1	-7.1	31.0	847.5	055.1	42.6
11500.0	725.4	7.8	-7.8	32.1	835.9	053.6	37.9
12000.0	702.1	6.5	-8.3	33.5	824.5	052.1	52.5
12500.0	680.9	5.4	-9.9	32.2	812.7	051.7	52.5
13000.0	658.6	4.7	-12.6	26.6	799.8	049.9	77.3
13500.0	627.2	4.1	-16.2	21.0	737.1	049.0	67.7
14000.0	612.9	3.8	-19.9	15.7	773.6	048.6	95.5
14500.0	590.3	4.1	-22.6	11.9	758.4	048.9	97.8
15000.0	592.1	3.5	-23.9	11.4	746.6	047.9	90.5
15500.0	561.7	2.6	-25.0	10.9	731.6	047.1	102.0
16000.0	570.9	2.4	-25.5	10.5	721.2	046.9	108.3
16500.0	560.2	2.3	-26.0	10.1	703.1	046.8	109.9
17000.0	549.6	1.2	-27.9	10.7	697.7	045.4	113.4
17500.0	539.2	-2.2	-23.9	13.0	637.9	043.3	9.4
18000.0	529.1	-1.5	-29.1	10.0	671.6	047.2	102.0
18500.0	519.0	-2.9	-30.2	10.0	663.7	040.0	115.6
19000.0	509.2	-4.2	-31.2	10.0	659.4	039.0	113.0
19500.0	499.5	-5.6	-32.2	10.0	657.4	103.1	23.5

GEODETIC COORDINATES
 33° 16' 712 LAT LEG
 106.49511 LONG LEG

0850 HRS MOT

CONTINENTAL COOKIES
53-16712 LAF LEG
1664311 1800000

TABLE 12 (continued)

INTERPOLATION

Flight altitude 40,000 feet
W.L.P. 30°
Altitude No. 207
0850 HRS MDT

Upper Air Data
27000-30267
JULY 11

SATELLITE COORDINATES
33.15712 LAT E
106.49511 LONG E

TABLE 12 (continued)

GEOPOTENTIAL HEIGHT	REFRACTION	REFRACTION	REFRACTION	REFRACTION	REFRACTION	REFRACTION	REFRACTION
AT 11,000 FT	ALT. MSL FCT	DEGREE IN GRAD., CLASSIFICATION	PERCENT NETT-P	GRAD/SEC	SECONDS NETT-P	DIRECTION DEGREES	DATA KNOTS
251.6	-40.5	.	.	376.4	594.5	296.1	39.0
240.0	-41.5	.	.	376.0	592.9	294.9	39.4
246.0	-42.9	.	.	365.7	591.2	293.7	39.9
235.0	-44.2	.	.	357.5	569.5	293.5	40.3
229.6	-45.1	.	.	351.4	547.8	293.3	40.2
224.4	-46.0	.	.	345.5	538.1	297.0	39.9
219.3	-46.2	.	.	339.6	534.4	300.7	39.4
214.4	-49.5	.	.	333.9	532.9	301.9	38.5
209.5	-50.4	.	.	328.3	580.9	300.8	37.0
204.9	-52.1	.	.	322.8	579.2	299.2	36.0
214.0	-53.0	.	.	317.4	577.4	297.1	35.6
215.0	-54.5	.	.	311.3	576.0	297.5	35.4
210.7	-55.6	.	.	305.4	574.0	300.6	35.3
156.2	-56.7	.	.	299.6	573.2	303.5	34.9
181.8	-57.7	.	.	294.0	571.8	305.7	34.3
177.4	-58.3	.	.	293.4	570.4	305.3	34.0
173.2	-59.9	.	.	282.9	568.9	305.1	34.2
169.1	-60.7	.	.	277.6	567.5	304.2	34.4
165.1	-62.0	.	.	272.4	566.1	303.6	34.4
161.1	-63.0	.	.	267.0	564.8	302.6	34.3
157.2	-63.4	.	.	261.6	563.9	303.7	33.9
153.5	-64.7	.	.	256.2	562.4	303.6	33.5
149.0	-65.6	.	.	251.1	561.2	302.4	33.4
145.9	-66.3	.	.	246.2	559.9	301.4	33.2
142.2	-67.3	.	.	241.3	558.2	303.1	32.8
138.7	-68.2	.	.	236.2	557.2	304.6	32.4
135.2	-69.4	.	.	231.1	556.1	307.6	31.1
131.9	-70.2	.	.	226.1	555.1	310.0	29.9
128.5	-70.7	.	.	221.3	554.0	312.0	28.3
125.2	-71.7	.	.	216.0	553.9	313.6	26.5
122.1	-72.1	.	.	211.5	552.4	314.0	24.2
118.9	-72.4	.	.	206.4	552.0	314.0	21.3

0850 HRS MDT

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ
الْكِتَابُ عِلْمٌ لِّلَّهِ فَمَا عَلِمَ مَنْ
عَلِمَ وَمَا يَعْلَمُ بِمَا لَمْ يَعْلَمْ

6 LONGITUD COORDINATES
53.16112 LAT DEG
106.497110 LONG

TABLE 12 (continued)

SUMMARY OF AIR DATA
30 SEP. 1950
AIRCRAFT NO. 60. 267 0850 HRS MDT

TYPE OF AIR DATA
2100030227
JALLET, R

TABLE 12 (continued)

GEODETIC LATITUDE	REF. SODIUM	TEMPERATURE	RELATIVE HUMIDITY	DENSITY	VEL. OF SOUND	WIND DIRECTION	WIND SPEED	INDEX
ALTIMETER	MM. Hg.	DEGREES	PERCENT	GRAMS/Cubic CM.	KILOMETERS PER SEC.	DEGREES	KNOTS	OF REFRACTION
70.0000.0	51.0	-62.3	85.2	95.5	10.5	10.7	1.000019	
69.9999.0	50.5	-61.7	92.4	99.6	11.2	1.000018		
69.9998.0	49.1	-61.2	97.5	103.9	11.8	1.000018		
69.9997.0	47.4	-60.5	78.5	110.5	10.5	1.000017		
69.9996.0	46.0	-60.1	75.4	116.5	126.0	9.5	1.000017	
69.9995.0	45.6	-59.5	74.4	120.4	120.4	7.3	1.000017	
70.0000.0	44.5	-59.0	72.4	120.1	119.2	6.2	1.000016	
69.9999.0	43.5	-54.2	70.5	120.3	124.0	1.7	1.000016	
69.9998.0	42.4	-57.9	68.7	121.6	120.4	4.7	1.000015	
69.9997.0	41.4	-57.3	67.0	121.6	120.2	8.0	1.000015	
69.9996.0	40.4	-57.6	65.4	122.0	121.1	10.7	1.000015	
69.9995.0	39.5	-57.4	63.8	122.2	120.7	12.9	1.000014	
69.9994.0	38.6	-57.3	62.2	122.4	120.6	15.4	1.000014	
69.9993.0	37.7	-57.1	60.7	122.9	120.2	14.9	1.000014	
69.9992.0	36.8	-57.0	59.2	122.8	120.5	14.0	1.000013	
69.9991.0	35.9	-56.8	57.8	123.0	120.1	13.1	1.000013	
69.9990.0	35.0	-56.7	56.4	123.2	120.6	11.6	1.000013	
69.9989.0	34.2	-56.5	55.0	123.4	120.3	10.3	1.000012	
69.9988.0	33.4	-56.4	53.7	123.6	120.0	14.0	1.000012	
69.9987.0	32.6	-56.2	52.4	123.8	120.2	13.2	1.000012	
69.9986.0	31.9	-56.1	51.1	124.0	120.1	13.0	1.000011	
69.9985.0	31.1	-55.9	49.9	124.2	120.1	11.6	1.000011	
69.9984.0	30.4	-55.8	48.7	124.4	120.1	10.3	1.000011	

11 AUGUST 1960 0850 HRS MDT
NO. 2, 2000 FT. ELEVATION

WIND DIRECTION
270 DEGREES
JALLES

TABLE 13.

TIME (A.M.), HRS	HTT	POSITION OF APPROXIMATE AIR DEGREES CENTIGRADE			WIND DIRECTION DEGREES (T)	WIND DATA DEGREES (T)	SPEED KNOTS
		LLW. PERCENT	LLW. PERCENT	LLW. PERCENT			
0000	5100	19.8	6.2	41.	87.3	1.9	
0010	6317	19.4	-5.6	20.	118.0	4.2	
0020	8021	15.1	-5.2	24.	133.0	4.9	
0030	1020	10.3	-6.5	30.	56.4	4.1	
0040	12504	5.3	-10.1	52.	64.0	4.0	
0050	14000	3.8	-23.2	12.	97.3	9.5	
0055	16457	1.2	-27.0	10.	113.3	19.9	
0100	16450	-5.5	-32.2	10.	103.7	23.4	
0105	22130	-11.1	-36.0	10.	70.9	33.3	
0110	25407	-18.2	-42.2	10.	95.3	27.3	
0115	28215	-26.6	-46.5	11.	58.4	14.2	
0120	31912	-31.4			299.3	22.6	
0125	36063	-40.6			295.6	39.1	
0130	40046	-53.5			297.1	35.6	
0135	43527	-59.4			305.0	34.1	
0140	46815	-65.5			302.0	33.4	
0145	50304	-71.8			313.9	20.5	
0150	54035	-71.1			356.2	11.1	
0155	59436	-70.3			50.5	6.2	
0200	61643	-63.8			52.9	1.1	
0205	64035	-66.0			66.4	10.8	
0210	68351	-61.6			101.3	11.3	
0215	72730	-57.5			42.1	11.5	
0220	75671	-65.7					

* * * A linear fit of the approximate intensity values was used in the interpolation.